Polarization:

Report Number: 07LR031FC

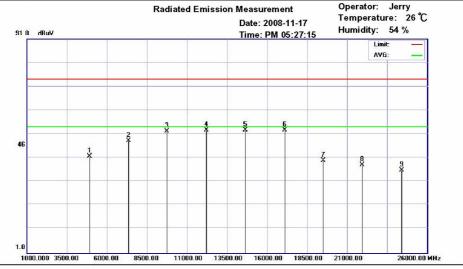
Vertical



## 1GHz~25 GHz (Vertical), Channel 1: 2412 MHz



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C.



Site: Chamber 02

Condition: FCC Class B 3M(Peak)

Mk.	Frequency (MHz)	RX_R (dBuV)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV)	Limit (dBuV)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
	4874.000	31.34	34.87	2.82	27.41	41.62	74.00	-32.38	100	238	peak
	7311.000	32.39	38.96	3.38	26.56	48.17	74.00	-25.83	201	108	peak
	9748.000	32.79	40.25	4.03	24.77	52.30	74.00	-21.70	100	333	peak
*	12185.000	34.23	42.25	4.52	28.29	52.71	74.00	-21.29	259	133	peak
	14622.000	31.01	45.07	4.87	28.41	52.54	74.00	-21.46	100	48	peak
	17059.000	29.78	45.28	5.43	27.79	52.70	74.00	-21.30	245	229	peak
	19496.000	28.41	32.5	5.71	26.86	39.76	74.00	-34.24	245	334	peak
	21933.000	25.33	33.1	6.07	26.54	37.96	74.00	-36.04	100	48	peak
	24370.000	23.52	33.45	5.56	26.73	35.80	74.00	-38.20	100	9	peak

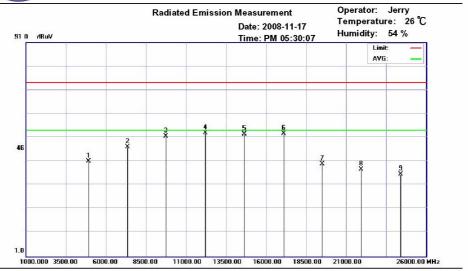
<sup>\*:</sup>Maximum data x:Over limit !:over margin



#### 1GHz~25 GHz (Horizontal), Channel 6:2437 MHz



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718



Site: Chamber 02

Frequency (MHz)

4874.000

7311.000

9748.000

12185.000

14622.000

17059.000

19496.000

21933.000

24370.000

Condition : FCC Class B 3M(Peak)

RX R

(dBuV)

30.76

31.25

32.03

34.37

30.88

29.76

28.38

25.01

23.29

Ant F

(dB)

34.87

38.96

40.25

42.25

45.07

45.28

32.5

33.1

33.45

Cab L

(dB)

2.82

3.38

4.03

4.52

4.87

5.43

5.71

6.07

PreAmp

27.41

26.56

24.77

28.29

28.41

27.79

26.86

26.54

26.73

Emission

(dBuV)

41.04

47.03

51.54

52.85

52.41

52.68

39.73

37.64

35.57

74.00

74.00

74.00

Margin Ant.Pos Tab.Pos Detector Limit (dBuV) (dB) 74.00 -32.96100 234 peak 74.00 -26.97 186 peak 241 74.00 -22.46 146 35 peak 74.00 -21.15 304 305 peak 74.00 -21.59 100 330 peak 100 74.00 -21.32 238 peak

343

148

314

Report Number: 07LR031FC

-34.27

-36.36

-38.43

3

260

352

peak

peak

peak

Horizontal

Polarization:

<sup>\*:</sup>Maximum data x:Over limit !:over margin

Polarization:

Report Number: 07LR031FC

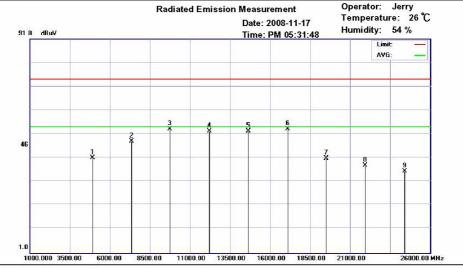
Vertical



## 1GHz~25 GHz (Vertical), Channel 6:2437 MHz



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C.



Site: Chamber 02

Condition: FCC Class B 3M(Peak)

Frequency	RX_R	Ant_F	Cab_L	PreAmp	Emission	Limit	Margin	Ant.Pos	Tab.Pos	Detector
(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV)	(dBuV)	(dB)	(cm)	(deg.)	
4874.000	30.67	34.87	2.82	27.41	40.95	74.00	-33.05	380	54	ma ale
4674.000	30.07	34.87	2.02	21.41	40.95	74.00	-33.05	380	54	peak
7311.000	32.22	38.96	3.38	26.56	48.00	74.00	-26.00	206	222	peak
9748.000	33.65	40.25	4.03	24.77	53.16	74.00	-20.84	100	262	peak
12185.000	33.81	42.25	4.52	28.29	52.29	74.00	-21.71	395	289	peak
14622.000	30.73	45.07	4.87	28.41	52.26	74.00	-21.74	318	179	peak
17059.000	30.21	45.28	5.43	27.79	53.13	74.00	-20.87	319	147	peak
19496.000	29.38	32.5	5.71	26.86	40.73	74.00	-33.27	399	194	peak
21933.000	25.05	33.1	6.07	26.54	37.68	74.00	-36.32	113	320	peak
24370.000	22.98	33.45	5.56	26.73	35.26	74.00	-38.74	162	90	peak

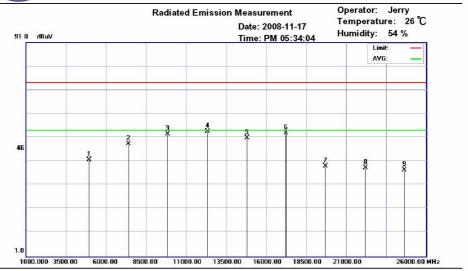
<sup>\*:</sup>Maximum data x:Over limit !:over margin



#### 1GHz~25 GHz (Horizontal), Channel 11: 2462 MHz



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road ,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718



Site: Chamber 02

Frequency (MHz)

Condition: FCC Class B 3M(Peak)

RX R

Ant\_F

Limit (dBuV)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
74.00	-32.41	318	328	peak

**Report Number: 07LR031FC** 

Polarization:

	4924.000	31.04	35.08	2.81	27.34	41.59	74.00	-32.41	318	328	peak
	7386.000	32.32	39.09	3.39	26.53	48.27	74.00	-25.73	269	42	peak
	9848.000	32.66	40.31	4.06	24.7	52.33	74.00	-21.67	100	283	peak
*	12310.000	34.81	42.35	4.56	28.14	53.58	74.00	-20.42	390	83	peak
	14772.000	28.91	45.28	4.88	28.27	50.80	74.00	-23.20	100	135	peak
	17234.000	29.16	45.8	5.44	27.64	52.76	74.00	-21.24	256	231	peak
	19696.000	27.49	32.5	5.74	26.79	38.94	74.00	-35.06	244	296	peak
	22158.000	25.25	33.35	6.11	26.56	38.15	74.00	-35.85	175	83	peak
	24620.000	24.72	33.84	5.43	26.73	37.26	74.00	-36.74	100	14	peak

Emission (dBuV)

Cab\_L PreAmp

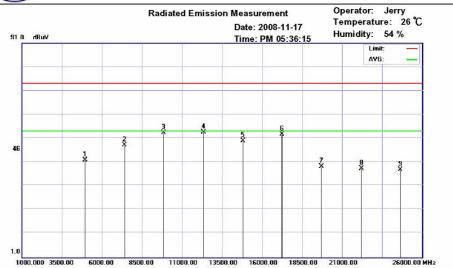
<sup>\*:</sup>Maximum data x:Over limit !:over margin



## 1GHz~25 GHz (Vertical), Channel 11:2462 MHz



Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road,Lung-Tan Hsiang,Tao Yuan Conty,Taiwan R.O.C. Tel:03-4071718



Site: Chamber 02

Condition: FCC Class B 3M(Peak)

Polarization: V

Report Number: 07LR031FC

Vertical

Mk.	Frequency (MHz)	RX_R (dBuV)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV)	Limit (dBuV)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
	4924.000	31.26	35.08	2.81	27.34	41.81	74.00	-32.19	100	2	peak
	7386.000	32.25	39.09	3.39	26.53	48.20	74.00	-25.80	368	25	peak
	9848.000	33.66	40.31	4.06	24.7	53.33	74.00	-20.67	270	46	peak
*	12310.000	34.66	42.35	4.56	28.14	53.43	74.00	-20.57	322	59	peak
	14772.000	28.09	45.28	4.88	28.27	49.98	74.00	-24.02	179	227	peak
	17234.000	29.12	45.8	5.44	27.64	52.72	74.00	-21.28	360	0	peak
	19696.000	27.58	32.5	5.74	26.79	39.03	74.00	-34.97	275	233	peak
	22158.000	25.38	33.35	6.11	26.56	38.28	74.00	-35.72	135	37	peak
	24620.000	25.18	33.84	5.43	26.73	37.72	74.00	-36.28	395	119	peak

<sup>\*:</sup>Maximum data x:Over limit !:over margin



#### -36- FCC ID: NCI-VNT6656GEV0X

Report Number: 07LR031FC

#### Note:

- > According to the standards used, Where limits are specified by agencies for both average and peak (or quasi-peak) detection, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.
- > "pk": peak mode
- > "av": average mode
- > "---": No meter reading data due to the emission level is smaller than spectrum noise level.
- The Spectrum noise level+Correction Factor < Limit 6 dB
- ➤ Margin=Corrected Amplitude Limit
- > Corrected Amplitude=Radiated Amplitude+Antenna Correction Factor+Cable Loss-Pre-Amplifier Gain
- A margin of -8dB means that the emission is 8dB below the limit.

#### All frequencies from 1GHz to 25 GHz have been tested.



#### 4.5 Band Edge Measurement

#### **4.5.1 Test Procedure**

#### Conducted

The transmitter output of EUT was connected to the spectrum analyzer. 1.

Equipment mode: Spectrum analyzer Detector function: Peak mode

SPAN: 100MHz RBW: 100KHz VBW: 100KHz

Center frequency: 2.4GHz, 2.4835GHz.

2. Using Peak Search to read the peak power of Carrier frequencies after Maximum Hold function is completed

Find the next peak frequency outside the operation frequency band

#### Radiated

Antenna and Turntable test procedure same as Radiated Emission Measurement. 1.

Equipment mode: Spectrum analyzer

Detector function: Peak mode

SPAN: 100MHz RBW: 100KHz VBW: 100KHz

Center frequency: 2.4GHz, 2.4835GHz.

Using Peak Search to read the peak power of Carrier frequencies after Maximum 2. Hold function is completed

3. Find the next peak frequency outside the operation frequency band

#### 4.5.2 Test Setup

#### Conducted

EUT	Spectrum Analyzer

#### Radiated

Same as Radiated Emission Measurement



#### -38- FCC ID: NCI-VNT6656GEV0X

#### 4.5.3 802.11b Test Data:

#### **Table: Band Edge measurement**

Radiated Test

Temp. (° C): 25

**Report Number: 07LR031FC** 

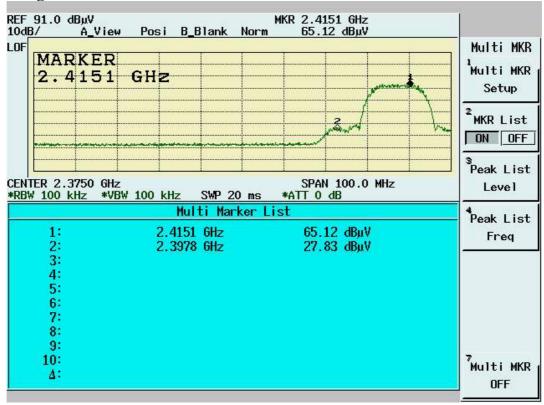
Test Engr: Jerry Humidity (%): 55

Channel	Frequency Spectrum Reading  (MHz) (dBuV)		Carrier - Outsideband Limit: >30dB (dB)	Pass/Fail	
1	2415.1	65.12			
Outside band	2397.8	27.83	37.29	Pass	
11	2465.1	67.59			
Outside band	2483.5	14.04	53.55	Pass	

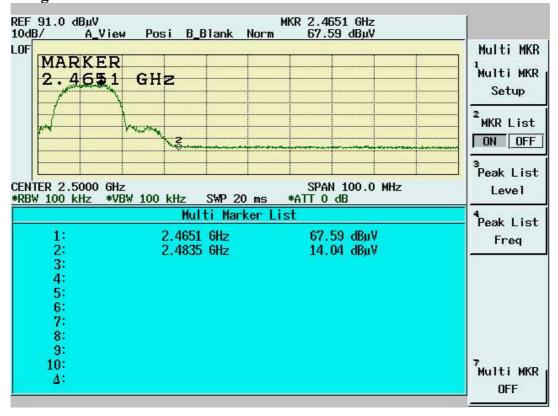
Note1: Two RF output( MAIN & AUX) have been test,the worse data shown above.

Note2: Conducted test has been tested in original report. Please refer to ISL report 06LR016FC.





#### **Band Edge Radiated Measurement**





#### -40- FCC ID: NCI-VNT6656GEV0X

## 4.5.4 802.11g Test Data:

#### **Table: Band Edge measurement**

Radiated Test

Temp. (° C): 25

**Report Number: 07LR031FC** 

Test Engr: Jerry Humidity (%): 55

Channel	Frequency	Spectrum Reading	Carrier - Outsideband Limit: >30dB	Pass/Fail
	(MHz)	(dBuV)	(dB)	
1	2413.2	61.42		
Outside band	2399.8	26.39	35.03	Pass
11	2463.3	61.45		
Outside band	2494.2	17.38	44.07	Pass

Note: Two RF output (MAIN & AUX) have been test, the worse data shown above.

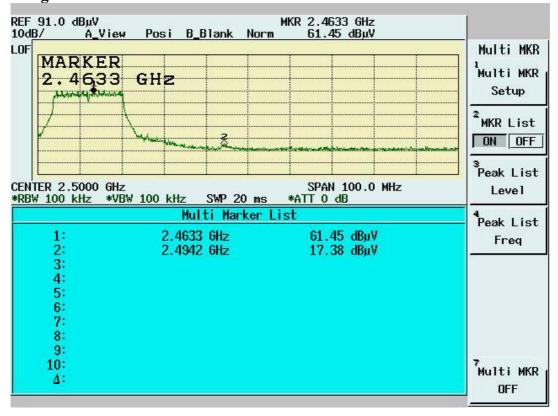
Note2: Conducted test has been tested in original report. Please refer to ISL report 06LR016FC.







#### **Band Edge Radiated Measurement**





#### -42-FCC ID: NCI-VNT6656GEV0X

**Report Number: 07LR031FC** 

#### 4.6 Restricted Bands Measurement

#### 4.6.1 Test Procedure (Radiated)

Antenna and Turntable test procedure same as Radiated Emission Measurement. 1.

Equipment mode: Spectrum analyzer

Detector function: Peak mode

SPAN: 100MHz RBW: 1MHz VBW: 3MHz

Center frequency: 2.4GHz, 2.4835GHz.
Using Peak Search to read the peak power of Carrier frequencies after Maximum 2. Hold function is completed.

Find the next peak frequency outside the operation frequency band 3.

For peak frequency emission level measurement in Restricted Band 4.

Change RBW: 1MHz

VBW: 10Hz Span: 100MHz.

Get the spectrum reading after Maximum Hold function is completed. 5.

#### 4.6.2 Test Setup (Radiated)

Same as Radiated Emission Measurement



#### 4.6.3 802.11b Test Data

#### **Table Band Edge Measurement (Radiated)**

Temp. (° C): 25

Report Number: 07LR031FC

Test Engr: Jerry Humidity (%): 55

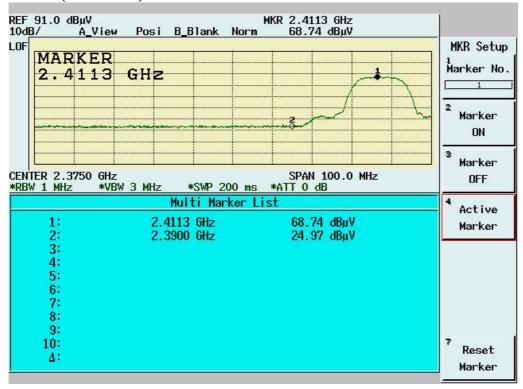
	Frequency	Spectrum	Correction	Emission	Limit	Equip.	Pass
Description	(MHz)	Reading	Factor	Level	(dBuV/m)	Setup	or
		(dBuV)	(dB/m)	(dBuV/m)		VBW	Fail
Channel_1 (peak mode)	2411.3	68.74	35.48	104.22		3MHz	
Channel_1 (average mode)	2414.2	60.16	35.48	95.64		10Hz	
Channel_11 (peak mode)	2461.3	73.61	35.5	109.11		3MHz	
Channel_11 (average mode)	2464.4	64.92	35.5	100.42		10Hz	
Channel_1 Restricted band (peak mode)	2390	24.97	35.47	60.44	74	3MHz	Pass
Restricted band (average mode)	2390	13.69	35.47	49.16	54	10Hz	Pass
Channel_11 Restricted band (peak mode)	2483.5	24.4	35.51	59.91	74	3MHz	Pass
Restricted band (average mode)	2483.5	13.64	35.51	49.15	54	10Hz	Pass

#### Note:

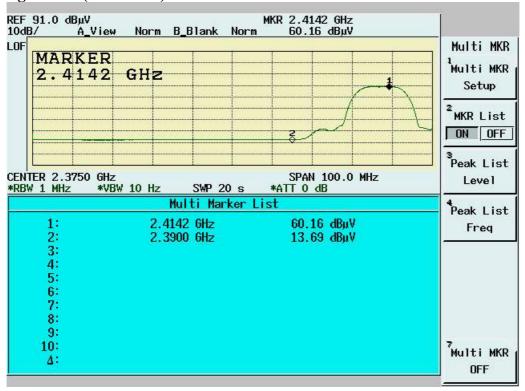
- > The Spectrum plot of emission level measurement in Restricted band is attached.
- ➤ Emission Level=Spectrum Reading+Correction Factor
- ➤ Correction Factor=Antenna Factor+cable loss-amplifier gain
- > Both Horizontal and Vertical polarizaion have been tested and the worst data is listed above.



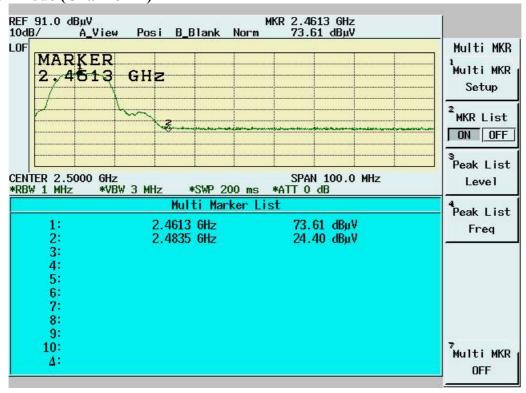
Band Edge measurement for radiated emission in Restricted Band(Radiated) Peak Mode (Channel 1)



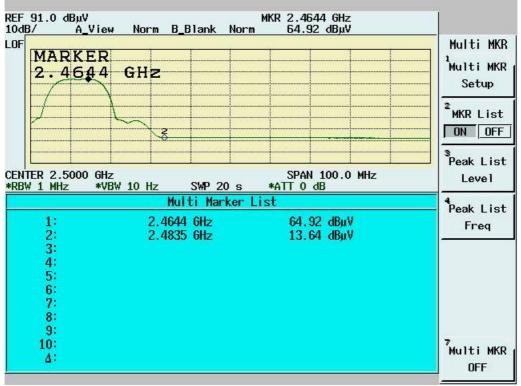
Band Edge measurement for radiated emission in Restricted Band(Radiated) Average Mode (Channel 1)



# Band Edge measurement for radiated emission in Restricted Band(Radiated) Peak Mode (Channel 11)



## Band Edge measurement for radiated emission in Restricted Band(Radiated) Average Mode (Channel 11)





#### 4.6.4 802.11g Test Data

#### **Table Band Edge Measurement (Radiated)**

Temp. (° C): 25

Report Number: 07LR031FC

Test Engr: Jerry Humidity (%): 55

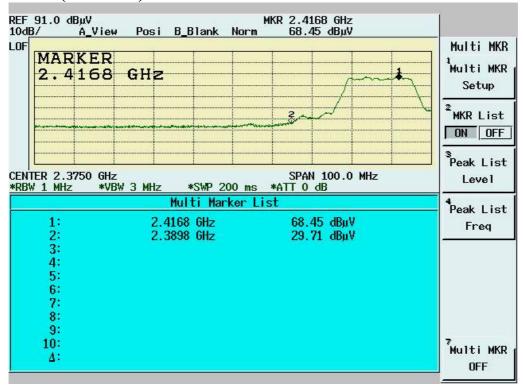
	Frequency	Spectrum	Correction	Emission	Limit	Equip.	Pass
Description	(MHz)	Reading	Factor	Level	(dBuV/m)	Setup	or
		(dBuV)	(dB/m)	(dBuV/m)		VBW	Fail
Channel_1 (peak mode)	2416.8	68.45	35.48	103.93		3MHz	
Channel_1 (average mode)	2415.4	57.02	35.48	92.5		10Hz	
Channel_11 (peak mode)	2466.8	70.19	35.5	105.69		3MHz	
Channel_11 (average mode)	2465.4	58.95	35.5	94.45		10Hz	
Channel_1 Restricted band (peak mode)	2389.8	29.71	35.47	65.18	74	3MHz	Pass
Restricted band (average mode)	2390	14.66	35.47	50.13	54	10Hz	Pass
Channel_11 Restricted band (peak mode)	2483.5	29.03	35.51	64.54	74	3MHz	Pass
Restricted band (average mode)	2483.5	15.04	35.51	50.55	54	10Hz	Pass

#### Note:

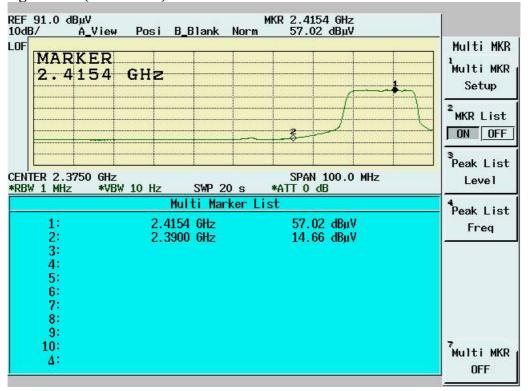
- > The Spectrum plot of emission level measurement in Restricted band is attached.
- ➤ Emission Level=Spectrum Reading+Correction Factor
- ➤ Correction Factor=Antenna Factor+cable loss-amplifier gain
- > Both Horizontal and Vertical polarizaion have been tested and the worst data is listed above.



Band Edge measurement for radiated emission in Restricted Band(Radiated) Peak Mode (Channel 1)

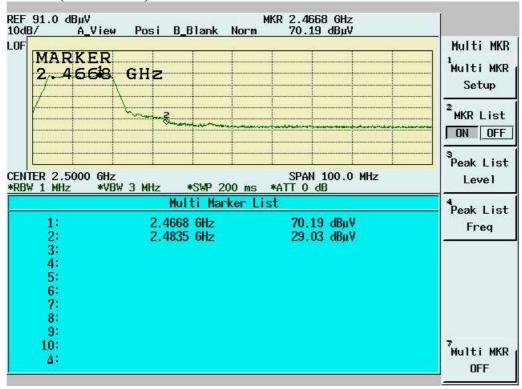


Band Edge measurement for radiated emission in Restricted Band(Radiated) Average Mode (Channel 1)

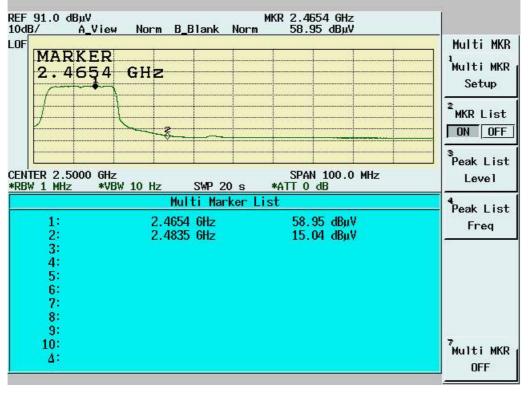




Band Edge measurement for radiated emission in Restricted Band(Radiated) Peak Mode (Channel 11)



Band Edge measurement for radiated emission in Restricted Band(Radiated) Average Mode (Channel 11)





4.7 RF Exposure Measurement [Section 15.247(b)(4) & 1.1307(b)]

See MPE report



#### 4.8 DSSS Peak Power Spectral Density [Section 15.247(d)]

#### 4.8.1 Test Procedure

1. The Transmitter output of EUT was connected to the spectrum analyzer.

Equipment mode: Spectrum analyzer

Detector function: Peak mode

SPAN:1.5MHz RBW: 3KHz VBW: 30KHz

Center frequency: fundamental frequency tested.

Sweep time= 500 sec.

2. Using Peak Search to read the peak power after Maximum Hold function is completed.

#### 4.8.2 Test Setup



#### 4.8.3 802.11b Test Data:

This item has already been tested in original report. Please refer to ISL report 06LR016FC.

#### 4.8.4 802.11g Test Data:

This item has already been tested in original report. Please refer to ISL report 06LR016FC.



## 5. Appendix

## **5.1 Appendix A: Measurement Procedure for Power line Conducted Emissions**

The measurements are performed in a 3.5m x 3.4m x 2.5m shielded room, which referred as Conduction 01 test site, or a 3m x 3m x 2.3m test site, which referred as Conduction 02 test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (50ohm/50uH) vs. Frequency Characteristic in accordance with the required standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

If the EUT is supplied with a flexible power cord, the power cord length in excess of the distance separating the EUT from the LISN shall be folded back and forth at the center of the lead so as to form a bundle not exceeding 40cm in length. If the EUT is provided with a permanently coiled power cord, bundling of the cord is not required. If the EUT is supplied without a power cord, the EUT shall be connected to the LISN by a power cord of the type specified by the manufacturer which shall not be longer than 1 meter. The excess power cord shall be bundled as described above. If a non-flexible power cord is provided with the EUT, it shall be cut to the length necessary to attach the EUT to the LISN and shall not be bundled.

The interconnecting cables were arranged and moved to get the maximum emission. Both the line of power cord, hot and neutral, were measured.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.



### 5.2 Appendix B: Test Procedure for Radiated Emissions

#### **Preliminary Measurements in the Anechoic Chamber**

The radiated emissions are initially measured in the anechoic chamber at a measurement distance of 3 meters. Desktop EUT are placed on a wooden stand 0.8 meter in height. The measurement antenna is 3 meters from the EUT. The test setup in anechoic chamber is the same as open site. The turntable rotated 360°C. The antenna height is varied from 1-2.5m. The primary objective of the radiated measurements in the anechoic chamber is to identify the frequency spectrum in the absence of the electromagnetic environment existing on the open test site. The frequencies can then be pre-selected on the open test site to obtain the corresponding amplitude. The initial scan is made with the spectrum analyzer in automatic sweep mode. The spectrum peaks are then measured manually to determine the exact frequencies.

#### **Measurements on the Open Site or 10m EMC Chamber**

The radiated emissions test will then be repeated on the open site or 10m EMC chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipment are set up on the turntable of one of the 3 or 10 meter open field sites. Desktop EUT are set up on a wooden stand 0.8 meter above the ground.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. Both reading are recorded with the quasi-peak detector with 120KHz bandwidth. For frequency between 30 MHz and 1000MHz, the reading is recorded with peak detector or quasi-peak detector. For frequency above 1 GHz, the reading is recorded with peak detector or average detector with 1 MHz bandwidth.

At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum emission. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings.



## 5.3 Appendix C: Test Equipment

#### 5.3.1 Test Equipment List

Location	<b>Equipment Name</b>	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Conduction	Coaxial Cable 1F-C2	Harbourindustr ies	RG400	1F-C2	02/13/2007	02/13/2008
Conduction	Digital Hygro-Thermometer Conduct	MicroLife	HT-2126G	ISL-Conductio n02	12/26/2007	12/26/2008
Conduction	EMI Receiver 07	Schwarzbeck Mess-Elektronik	FCKL 1528	1528-201	08/31/2007	08/30/2008
Conduction	LISN 01	R&S	ESH2-Z5	890485/013	01/03/2008	01/03/2009
Conduction	LISN 06	R&S	ESH3-Z5	828874/009	12/14/2007	12/14/2008
Radiation	BILOG Antenna 08	Schaffner	CBL6112B	2756	06/13/2007	06/12/2008
Radiation	Coaxial Cable Chmb 02-10M	Belden	RG-8/U	Chmb 02-10M	02/13/2007	02/12/2008
Radiation	Digital Hygro-Thermometer Chmb 02	MicroLife	HT-2126G	Chmb 02	12/26/2006	12/26/2008
Radiation	EMI Receiver 02	HP	85460A	3448A00183	12/29/2007	12/28/2008
Radiation	Spectrum Analyzer 13	Advantest	R3132	121200411	03/16/2007	03/15/2008
Radiation	Horn Antenna 02	Com-Power	AH-118	10088	12/28/2007	12/27/2008
Radiation	Horn Antenna 04	Com-Power	AH-826	081-001	03/23/2007	03/22/2008
Radiation	Horn Antenna 05	Com-Power	AH-640	100A	11/16/2007	11/15/2008
Radiation	Microwave Cable RF SK-01	HUBER+SUH NERAG.	Sucoflex 102	22139 /2	06/01/2007	06/01/2008
Radiation	Preamplifier 09	MITEQ	AFS44-00102 650-40-10P-44	858687	04/02/2007	04/02/2008
Radiation	Preamplifier 10	MITEQ	JS-26004000-2 7-5A	818471	12/28/2007	12/28/2008
Radiation	High Pass Filter 01	HEWLETT-P ACKARD	84300-80038	001	N/A	N/A
Radiation	High Pass Filter 02	HEWLETT-P ACKARD	84300-80039	005	N/A	N/A
Radiation	Spectrum Analyzer 14	Advantest	R3182	140600028	12/06/2007	12/06/2008

Note: Calibration is traceable to NIST or national or international standards.

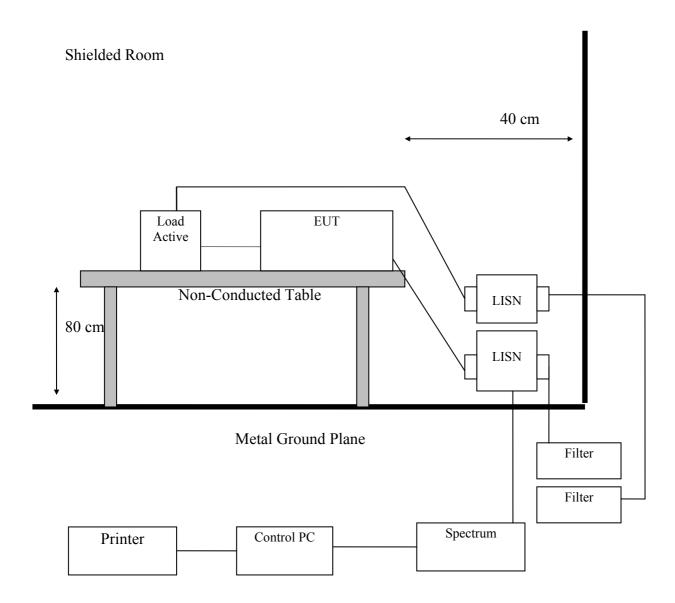
#### 5.3.2 Software for Controlling Spectrum/Receiver and Calculating Test Data

Radiation/Conduction	Filename	Version	Issued Date
Conduction	Tile.exe	1.12E	7/7/2000
Radiation	Tile.exe	1.12C	6/16/2000



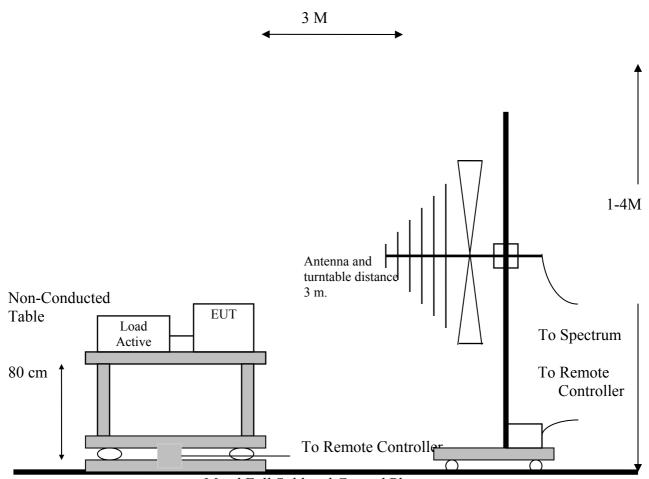
## 5.4 Appendix D: Layout of EUT and Support Equipment

#### **5.4.1** General Conducted Test Configuration

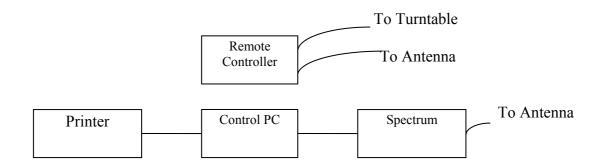




#### 5.4.2 General Radiation Test Configuration



Metal Full Soldered Ground Plane





#### 5.5 Appendix E: Description of Support Equipment

#### 5.5.1 Description of Support Equipment

## Support Unit 1.

Description: DELL USB Mouse

Model Number: M-UR69 Serial Number: LNA24412741

Power Supply Type: N/A
Power Cord: N/A

FCC ID: (Complied with FCC DOC)

## **Support Unit 2.**

Description: DELL 19" LCD Monitor

Model: 2000FP

AC Adapter: DELL(ADP-70EB)

Serial Number: N/A

DSUB In: One 15 Pins
DVI In: One Pins
S-Video In: One7 Pins

Power Cord: Non-shielded, Detachable FCC ID: (Complied with FCC DOC)

## **Support Unit 3.**

Description: VNT Mini-Card Extender Board

Model: VNO131D

Serial Number: N/A USB2.0 Connector: one Mini-Card Slot: one



#### -57- FCC ID: NCI-VNT6656GEV0X

**Report Number: 07LR031FC** 

## Support Unit 4.

Description: IBM Notebook Personal Computer

Model: 2371 Serial Number: N/A

Power Supply Type: Switching AC Adapte 56W

Lite-On (Model: 02K6809) 3 pins

CPU Type: Intel Pentium-M 1.2 GHz

Hard Disk Device: Hitachi 20GB (Model: HTC424020F7AT00)
DDR: 256MB Infineon (Model: HYB25D256160BT-6)

BT/MODEM card: Actiontec (Model: BMDC200)

Wireless card: Phillips (Model: WLAN 802.11ABG

930700811107 WW)

DC-In: one VGA Port: one **USB2.0** Connector: two LAN Connector: one Modem Port: one **PCIMCIA Connector:** one SD Connector one **Docking Connector:** one

Battery: Sanyo 4 cell (Model: 92P0999)

Power Cord: Shielded 3 PIN, 2 PIN

LCD: Samsung 12.1" XGA TFT (Model:

LTN121XA-L01)

Maximum display Resolution: 1024X768 Non-interlaced



#### **5.5.2** Software for Controlling Support Unit

Test programs exercising various part of EUT were used. The programs were executed as follows:

- A. Read and write to the disk drives.
- B. The RF software makes the transmitter continuously sending RF signals
- C. Repeat the above steps.

	Filename	<b>Issued Date</b>
WLAN test software (2.16.0.1)	MP Tool.exe	2006/01/06

#### 5.5.3 I/O Cable Condition of EUT and Support Units

Description	Path	Cable Length	Cable Type	Connector Type
AC Power Cord	110V (~240V) to AC Power Cord Inlet (3-pin)	1.8M	Nonshielded, Detachable	Plastic Head
LCD Monitor D-SUB Data Cable	LCD Monitor to EUT D-SUB Port	1.6M	Shielded, Detachable	Metal Head
LCD Monitor DVI Data Cable	LCD Monitor to EUT DVI Port	1.6M	Shielded, Detachable	Metal Head
LCD Monitor S Data Cable	LCD Monitor to EUT S Port	1.6M	Shielded, Detachable	Metal Head
Mouse Data Cable	Mouse to PC Mouse port	1.8M	Shielded, Un-detachable	Metal Head



## 5.6 Appendix F: Accuracy of Measurement

Test Site: Conduction 02

Item	Source of Uncertainty	Probability Distribution	Total Uncerta	inties (dB)	Standard Unce	ertainty (dB)
1	Systematic Effects: (Assessment from 20 repeat observation; 1 reading on EUT)	Normal	k=2	0.104	k=1	0.052
2	Random Effects: (Assessment from 20 random observations; 1 reading on EUT)	Normal	k=2	0.330	k=1	0.165
3	Receiver Calibration	Rectangular	k=1.73	1.000	k=1	0.577
4	LISN Factor Calibration	Normal	k=2	1.200	k=1	0.600
5	Cable Loss Calibration	Normal	k=2	1.000	k=1	0.500
6	Combined Standard Uncertainty Uc(y)	Normal			k=1	0.850
7	Total Uncertainty @95% mim. Confidence Level	Normal	k=2	1.701		

Measurement Uncertainty Calculations:

Uc (y) = square root ( 
$$u_1 (y)^2 + u_2 (y)^2 + \dots + u_n (y)^2$$
 )

$$U = 2 * Uc (y)$$

Note: The measurement Uncertainties mentioned above also refer to NIS 81-1994 of NAMAS : The treatment of Uncertainty in EMC Measurement.

**International Standards Laboratory** 

Test Site: Chamber 02-3M

Item	Source of Uncertainty	Probability Distribution	Total Uncerta	inties (dB)	Standard Unce	ertainty (dB)
1	Systematic Effects: (Assessment from 20 repeat observation; 1 reading on EUT)	Normal	k=2	0.067	k=1	0.034
2	Random Effects: (Assessment from 20 random observations; 1 reading on EUT)	Normal	k=2	0.103	k=1	0.052
3	Receiver Calibration	Rectangular	k=1.73	1.000	k=1	0.577
4	Antenna Factor Calibration	Normal	k=2	1.700	k=1	0.850
5	Cable Loss Calibration	Normal	k=2	1.000	k=1	0.500
6	Combined Standard Uncertainty Uc(y)	Normal			k=1	1.029
7	Total Uncertainty @95% mim. Confidence Level	Normal	k=2	2.059		

Measurement Uncertainty Calculations:

Uc (y) = square root ( 
$$u_1 (y)^2 + u_2 (y)^2 + \dots + u_n (y)^2$$
)

$$U = 2 * Uc (y)$$

Note: The measurement Uncertainties mentioned above also refer to NIS 81-1994 of NAMAS : The treatment of Uncertainty in EMC Measurement.



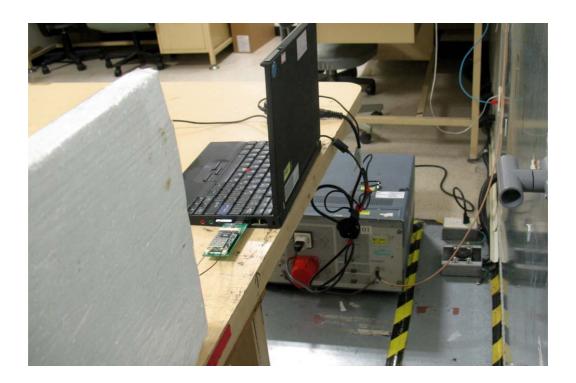
## 5.7 Appendix G: Photographs of EUT Configuration Test Set Up

The Front View of Highest Conducted Set-up For EUT





The Back View of Highest Conducted Set-up For EUT







The Front View of Highest Radiated Set-up For EUT



The Back View of Highest Radiated Set-up For EUT





## 5.8 Appendix H: Antenna Spec.

Please refer to the attached file.